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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,314	02/17/2004	B. Raghava Reddy	HES 2002-IP-009337U1	9746
28857	7590	07/26/2007		
CRAIG W. RODDY HALLIBURTON ENERGY SERVICES P.O. BOX 1431 DUNCAN, OK 73536-0440			EXAMINER KUGEL, TIMOTHY J	
			ART UNIT	PAPER NUMBER
			1712	
			MAIL DATE	DELIVERY MODE
			07/26/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/780,314	<b>Applicant(s)</b> REDDY ET AL.	
	<b>Examiner</b> Timothy J. Kugel	<b>Art Unit</b> 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 21-23,27-35 and 37-57 is/are pending in the application.
- 4a) Of the above claim(s) 41-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-23,27-35,37-40,56 and 57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 21-23,27-35 and 37-57 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 21-23, 27-35 and 37-57 are pending as amended on 5 March 2007, claims 1-20, 24-26 and 36 being cancelled. Claims 41-55 are withdrawn from further consideration
2. The text of those sections of Title 35, US Code not included in this action can be found in a prior Office action.

### ***Response to Amendment***

3. Applicant's amendment, filed 5 March 2007, particularly specifying the linear material to be a polymer in dependent claim 33, has been fully considered and overcomes the following:

The rejection of claim 33 under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been withdrawn.

### ***Response to Arguments***

4. Applicant's argument, filed 5 March 2007, particularly that US Patent 6,169,058 (Le hereinafter) fails to teach the polymer claimed in that Le's polymer is water-insoluble, has been fully considered and is persuasive.

The rejection of claims 21-23, 27, 28, 31-35, 37-39 and 57 under 35 USC 102(b) as being anticipated by Le has been withdrawn.

The rejection of claims 29, 30 and 56 under 35 USC § 103(a) as being unpatentable over Le as in view of US Patent 6,444,316 (Reddy '316 hereinafter) has been withdrawn.

The rejection of claim 40 under 35 USC § 103(a) as being unpatentable over Le in view of US Patent 5,192,461 (Tomaszewski hereinafter) has been withdrawn.

***Claim Rejections - 35 USC § 102 and/or 35 USC § 103***

5. Claims 21-23, 27, 28, 31, 33-35, 38 and 39 are rejected under 35 USC 102(b) as being anticipated by or, in the alternative, under 35 USC 103(a) as being unpatentable over Evani as applied to claims 21-23, 27, 33, 35, 38 and 39 above.

Evani teaches a wellbore treatment fluid comprising an aqueous medium (Column 2 Lines 41-55) 0.5 weight percent (Column 3 Line 54 – Column 4 Line 45) of a water-soluble hydrophilic/hydrophobic polymer—specifically exemplifying copolymers of acrylamide or methacrylamide and salts of acrylic acid such as sodium acrylate (Column 5 Line 38 – Column 6 Line 5) and a non-ionic surfactant (Abstract).

Since Evani teaches the same composition as claimed, one of ordinary skill in the art at the time the invention was made would have expected that the thermal activity, and the effectiveness of the viscosity to suspend solids or drilling cuttings of the Evani composition would inherently be the same as claimed. If there is any difference between the product of Evani and the product of the instant claims the difference would have been minor and obvious.

Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 USC 102 and 103. "There is nothing inconsistent in concurrent rejections for obviousness under 35 USC 103 and for anticipation under 35 USC 102." *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977).

6. Claim 32 and 57 are rejected under 35 USC § 103(a) as being unpatentable over Evani as applied to claims 21-23, 27, 28, 31, 33-35, 38, 39 and 57 above.

Evani teaches a wellbore treatment fluid comprising an aqueous medium, 0.5 weight percent of a water-soluble hydrophilic/hydrophobic polymer—specifically exemplifying copolymers of acrylamide or methacrylamide and salts of acrylic acid such as sodium acrylate and a non-ionic surfactant as detailed above.

Since Evani teaches the same composition as claimed, one of ordinary skill in the art at the time the invention was made would have expected that the thermal activity of the Evani composition would inherently be the same as claimed. If there is any difference between the product of Evani and the product of the instant claims the difference would have been minor and obvious.

Evani does not expressly disclose an embodiment wherein the polymer is crosslinked.

Evani does disclose however, that the prior art teaches that the polymer may be crosslinked (Column 2 Lines 4-8).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to crosslink the polymer. The motivation to do so would have been to improve the polymer's resistance to thermal and shear degradation (Column 2 Lines 4-8).

7. Claims 29, 30 and 56 rejected under 35 USC § 103(a) as being unpatentable over Evani as applied to claims 21-23, 27, 28, 31-35, 38, 39 and 57 above in view of Reddy.

Evani teaches a wellbore treatment fluid comprising an aqueous medium, 0.5 weight percent of a water-soluble hydrophilic/hydrophobic polymer—specifically exemplifying copolymers of acrylamide or methacrylamide and salts of acrylic acid such as sodium acrylate and a non-ionic surfactant as detailed above.

Since Evani teaches the same composition as claimed, one of ordinary skill in the art at the time the invention was made would have expected that the thermal activity of the Evani composition would inherently be the same as claimed. If there is any difference between the product of Evani and the product of the instant claims the difference would have been minor and obvious.

Evani does not disclose expressly that the salt is encapsulated.

Reddy discloses oil field treatment compositions comprising encapsulated salts such as ammonium chloride, ammonium persulfate, sodium chlorate and sodium perborate (Column 4 Lines 37-46).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include the encapsulated salts of Reddy in the composition of Evani. The motivation to do so would have been to control the times when the chemicals are released in aqueous fluids (Reddy Column 1 Lines 13-21).

8. Claim 37 is rejected under 35 USC § 103(a) as being unpatentable over Evani as applied to claims 21-23, 27, 28, 31-35, 38, 39 and 57 above in view of Le.

Evani teaches a wellbore treatment fluid comprising an aqueous medium, 0.5 weight percent of a water-soluble hydrophilic/hydrophobic polymer—specifically exemplifying copolymers of acrylamide or methacrylamide and salts of acrylic acid such as sodium acrylate and a non-ionic surfactant as detailed above.

Since Evani teaches the same composition as claimed, one of ordinary skill in the art at the time the invention was made would have expected that the thermal activity of the Evani composition would inherently be the same as claimed. If there is any difference between the product of Evani and the product of the instant claims the difference would have been minor and obvious.

Evani does not disclose expressly the composition further comprising a proppant.

Le discloses a wellbore treating fluid—specifically a proppant-laden (Column 3 Line 33 – Column 4 Line 16) fracturing fluid (Column 1 Lines 6-16)—comprising from about 0.1% to about 1.5% (Column 3 Line 33 – Column 4 Line 16) of a non-ionic hydrophobically modified polymer—specifically a formulation of acrylamide, sodium

acrylate and a crosslinker (Column 11 Lines 56-63)—and a nonionic surfactant (Column 12 Line 63 – Column 13 Line 7).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include the proppant of Le the composition of Evani. The motivation to do so would have been to prop fractures open during fracturing operations (Le Column 3 Lines 39-45).

9. Claim 40 is rejected under 35 USC § 103(a) as being unpatentable over Evani as applied to claims 21-23, 27, 28, 31-35, 38, 39 and 57 above in view of Tomaszewski.

Evani teaches a wellbore treatment fluid comprising an aqueous medium, 0.5 weight percent of a water-soluble hydrophilic/hydrophobic polymer—specifically exemplifying copolymers of acrylamide or methacrylamide and salts of acrylic acid such as sodium acrylate and a non-ionic surfactant as detailed above.

Since Evani teaches the same composition as claimed, one of ordinary skill in the art at the time the invention was made would have expected that the thermal activity of the Evani composition would inherently be the same as claimed. If there is any difference between the product of Evani and the product of the instant claims the difference would have been minor and obvious.

Evani does not disclose expressly that the non-ionic surfactant is an ethylene glycol decyl ether surfactant.

Tomaszewski discloses a composition comprising a surfactant with ethylene glycol decyl ether moieties (Column 2 Lines 47-59).



At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include the ethylene glycol decyl ether surfactant of Tomaszewski in the composition of Le. The motivation to do so would have been increase the solubility of any ethoxylated nonyl phenols present (Tomaszewski Column 2 Lines 60-68).

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Kugel whose telephone number is (571) 272-1460. The examiner can normally be reached 6:00 AM – 4:30 PM Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Timothy J. Kugel/  
Patent Examiner, AU 1712

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